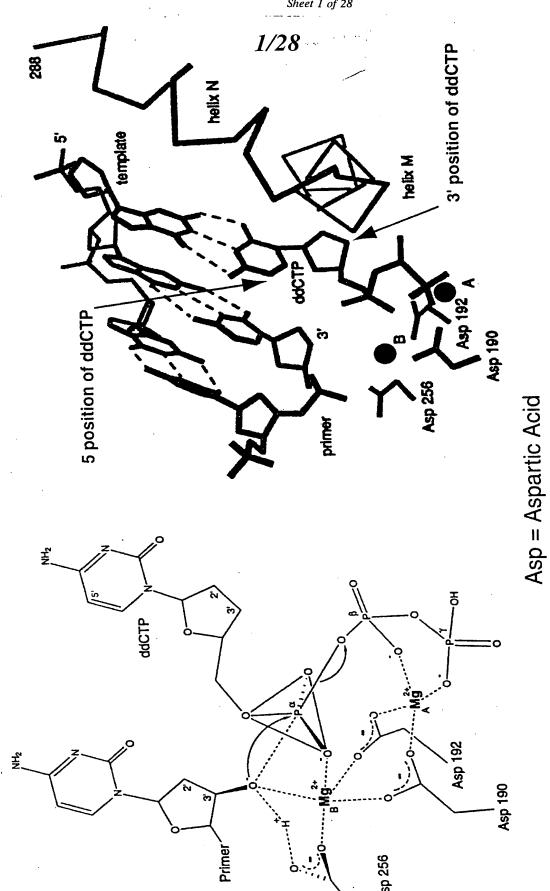
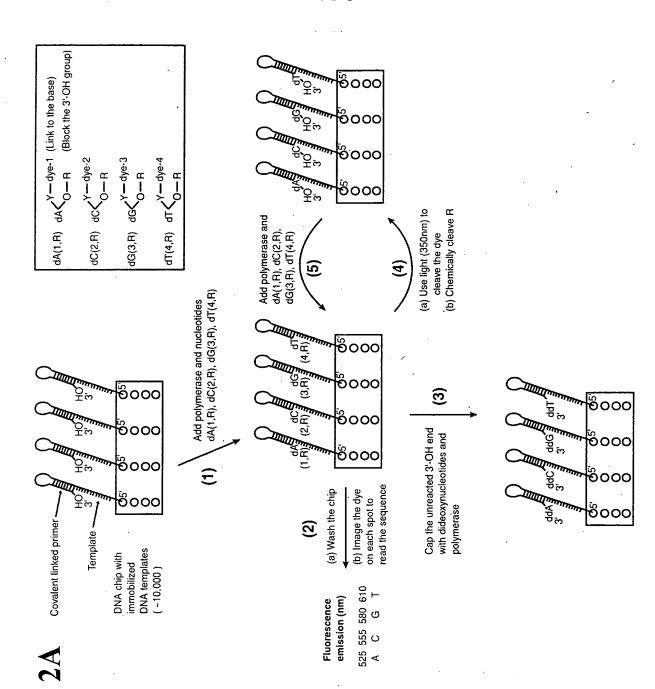
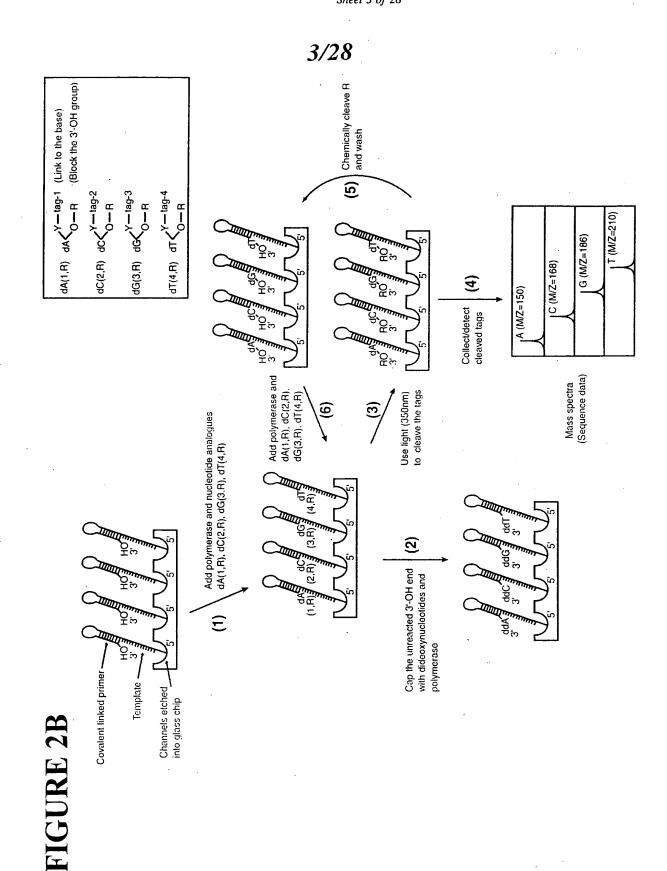
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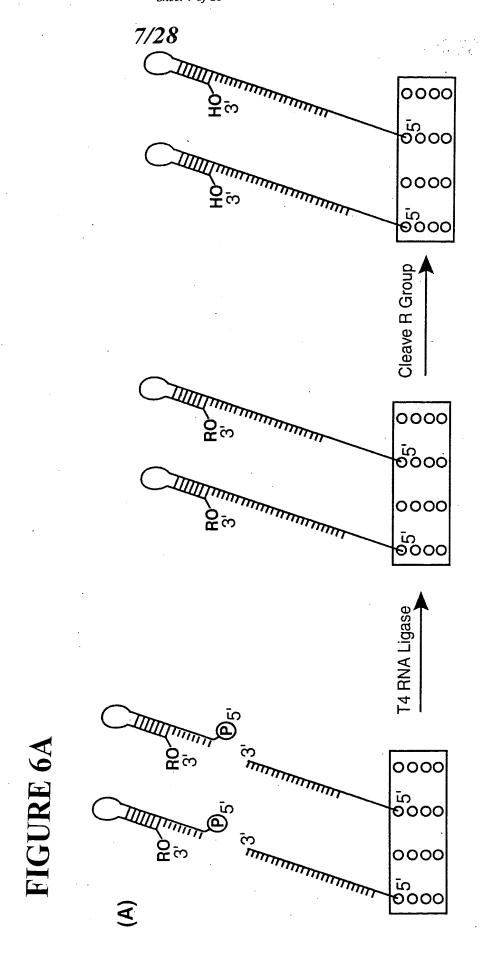
FIGURE

*TEA = Triethylamine,**NHS = N-Hydroxysuccinimide

 Ξ

FIGURE

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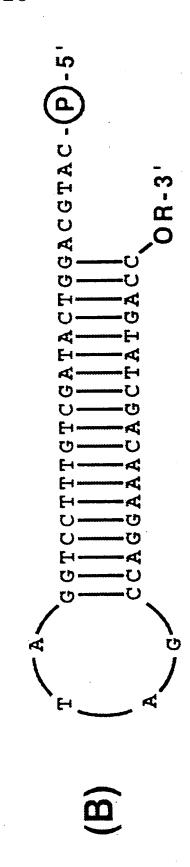


FIGURE 6B

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Photocleavable Linker

R = H, CH_2OCH_3 (MOM) or CH_2 -CH= CH_2 (Allyl)

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FIGURE 8

Photocleavable Linker

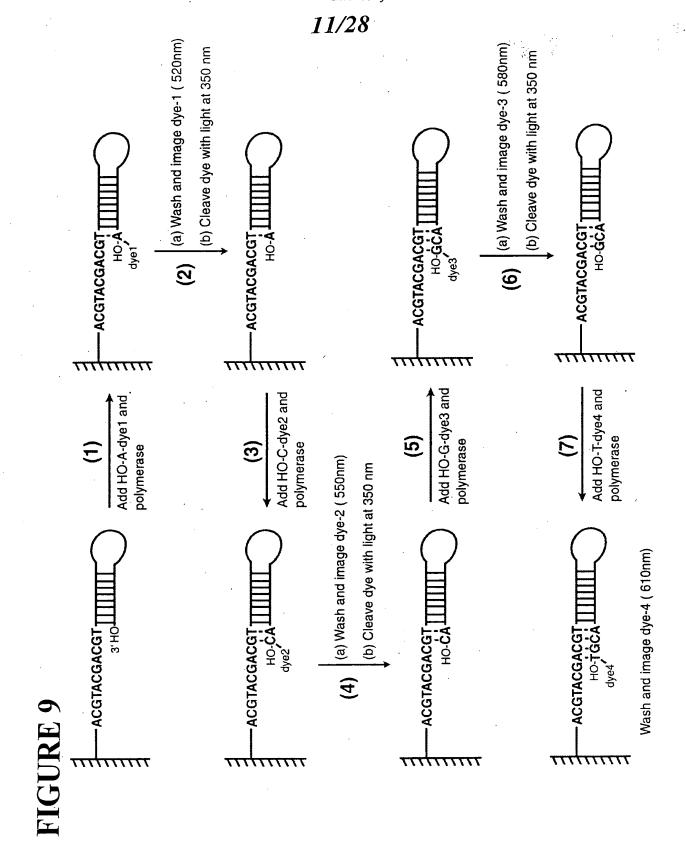
$$(H_3C)_2N \xrightarrow{\text{O}} (COO \xrightarrow{\text{N}(CH }_3)_2)$$

$$(H_3C)_2N \xrightarrow{\text{O}} (N_1CH _3)_2$$

$$(Tam-NHS)$$

$$O_2N \xrightarrow{\text{N}} (CH _3)_2$$

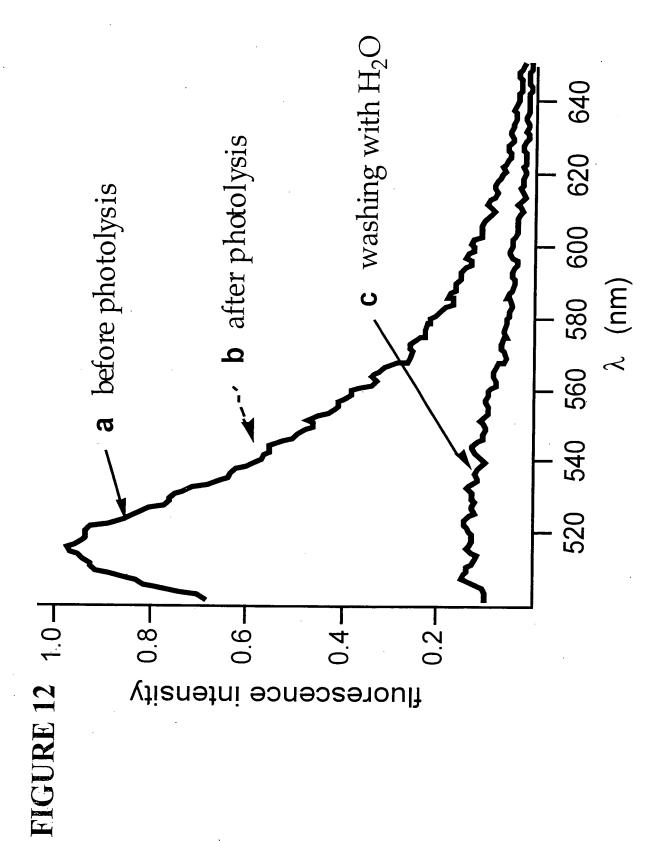
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12/28 DNA Fragment 1 (DNA-Photolinker3-RO-A-Tam) PC-Tam $(H_3C)_2N_$ h v (300-360nm) 0= **DNA Fragment 2** 5'-ACTCGAGGTACG — O_R 5'-ACTCGAGGTACG ---O-

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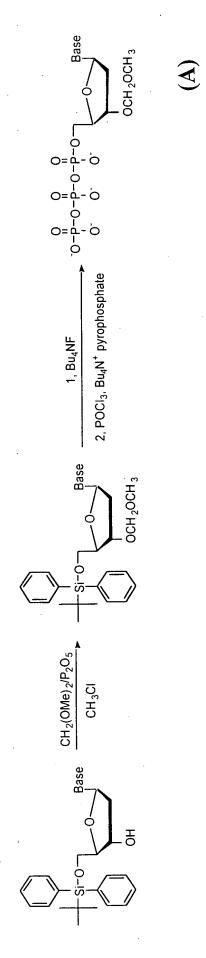
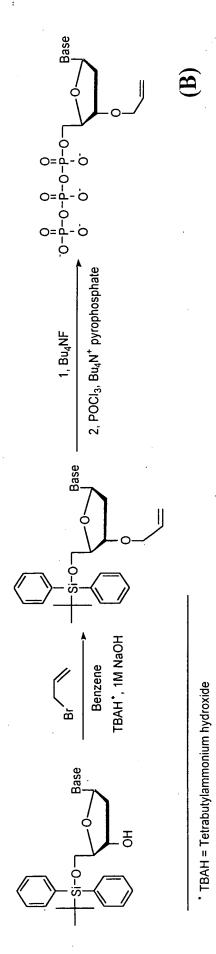
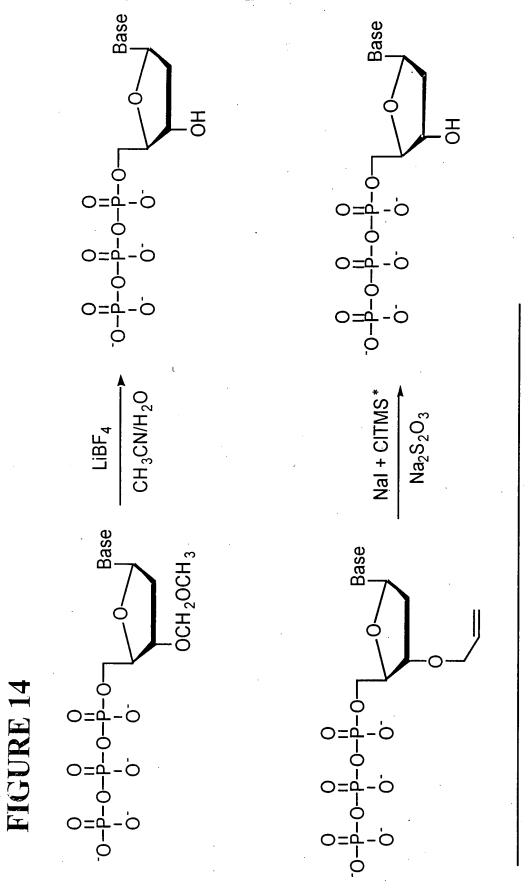


FIGURE 13A





*CITMS = chlorotrimethylsilane

R = H, CH_2OCH_3 (MOM) or CH_2 - $CH=CH_2$ (Allyl)

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		·	
ET Dve,	λ _{em} = 620 nm	HOOLOOH Fam-CLRox	HO3S (Cy2-Cl ₂ Rox
ET Dye ₃	λ _{em} = 590 nm	HO COOH Fam-Cly Tam	Hoss Cycle Sos
ET Dye ₂	λ _{em} = 560 nm	H ₂ CH ₂ CHN C O THCH ₂ CH ₃ C C COO C C COO C COO C COO C COO COO	H ₃ CH ₂ CHN _T C ₁ C ₁ C ₂ C ₂ C ₂ C ₁ C ₂ C ₂ C ₂ C ₁ C ₂
ET Dye,	չ _{բա} = 530 nm	HO COOH HO O O O O O O O O O O O O O O O O O	HO ₃ S \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \

FIGURE 15B

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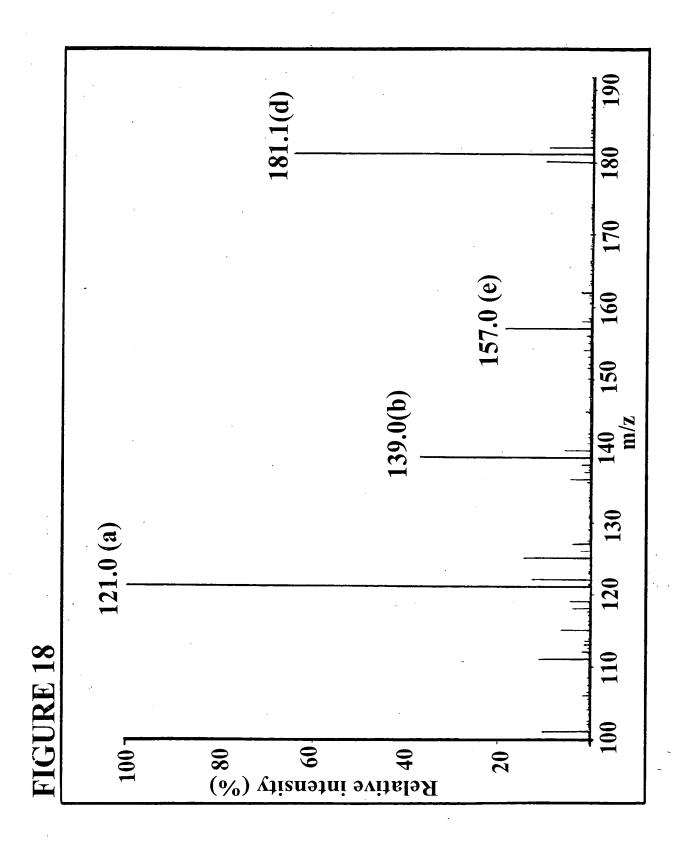
FIGURE 16

!

			Mass Tag Precursor				Photoactive Mass Tag	·	
·	70		OMe	MW=180 (T)) 91	O ₂ N—OMe	MW=180+47	(<u>T</u>)
E 17	ပ			MW=156 (G)	1. HNO ₃ 2. NaBH ₄	HO H	O_2N	MW=156+47	(9)
	q	>	F F	MW=138 (C)) -	O ₂ N	MW=138+47	(C)
FIGURE 17	.	·		MW=120 (A)	·)—	O_2N	MW=120+47	(A)

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(Nitro-Benzyl)-dATP

F-(Nitro-Benzyl)-dCTP

2(Meo)-(Nitro-Benzyl)-dTTP

MW=180

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FIGURE 21

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FIGURE 22

$$S-ACTCGAGGTACG-O$$

$$OR$$

$$F. O_2N$$

$$OR$$

$$F. O_2N$$

$$OR$$

$$F. O_2N$$

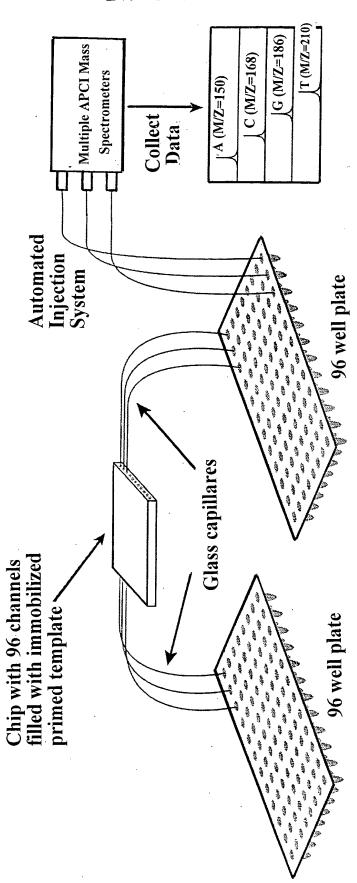
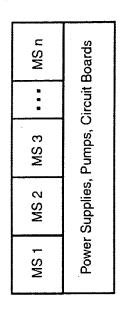


FIGURE 23

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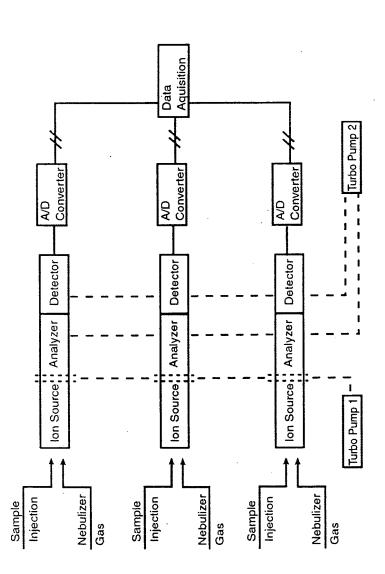


FIGURE 24